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ABSTRACT

The role of the dietitian as a teacher of clients who must adhere to a special diet for health reasons is discussed. The objective of this education process is to achieve a complete understanding on the part of the client not only of what is allowed in the diet but also why it is desirable. The dietitian in the professional role as an educator uses learning theory to understand previously conditioned responses of clients; to meet and approach the client in terms of that person's attitude and culture; to decide goals and provide opportunities for maximum learning; and to reinforce appropriate behaviors. (JD)

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Toward Achieving the Dietitian's Goal:
Client Education

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Toward Achieving the Dietitian's Goal: Client Education

Introduction

Dietitians are voicing their growing concern about their professional role as educators by asking for help to increase their effectiveness as teachers of clients as well as instructors of their staff personnel. As knowledgeable, informed experts in their subject matter already, they seek insights into how best to cause behavioral change in their learners.

Fundamental principles of learning theory and a hierarchical view of instructional objectives serve as a base for the dietitian's development in his "educator" role. Various learning theories attempt to answer the question, "How do people learn?", while an understanding of the use of instructional objectives in teaching illustrates the levels of complexity in cognitive learning. Both areas, learning theory and objectives, provide methodological implications for the dietitian as an educator.

Theories of Learning

A knowledge of the theories of learning is useful to any professional person in a teaching role, since anyone who attempts to facilitate learning in another person must make assumptions, whether implicitly or explicitly, about the nature of teaching-learning relationship. There are three families of learning theories which can be clearly differentiated from each other in terms of their views of the nature of man and in terms of individual motivation: classical conditioning, operant conditioning, and cognitive field theories.

Classical conditioning as a theory in the 1970's still follows the basic tenets of Pavlov's (1927) early experiments in 1912. The Pavlovian model illustrates that when an unconditioned stimulus (UCS) is presented to the organism, the unconditioned response (UCR) is elicited. For example, when meat powder (UCS) is presented to a dog, he elicits salivation (UCR). Conditioning occurs

when the bell, the conditioned stimulus (CS), is paired with the meat powder (UCS) and the salivation, the conditioned response (CR), occurs. After several simultaneous presentations of the meat powder and the bell, the dog demonstrates that learning has taken place by eliciting the salivation (CR) to the bell (CS) by itself.

Such conditioning is not limited to animals. There is strong evidence that humans also learn according to Pavlov's theory. Many parents have observed fear reactions in their children upon entering a pediatrician's office. The explanation for such fear response, in terms of classical conditioning, would be that pain from frequent injections as a baby is the UCS; crying is the UCR; the appearance of the waiting room, the antiseptic odor, or the sight of people in white coats is the CS; and finally, the crying is again the CR. Again, it is the simultaneous pairing of environmental cues with the original painful stimulus that causes the crying response.

Dietitians who have the major responsibility for instructing hospital patients in the appropriate diets often encounter a fear reaction from the patients. They have been conditioned to be apprehensive about new personnel visiting in their rooms, where more people in white means only more injections, blood tests, etc. Recognizing that such a classical conditioning of fear may interfere with the diet instruction situation, the dietitian can immediately take action to avoid the patient's "pairing" of him with unpleasant circumstances. To allay anxiety the dietitian might say, "I'm here to talk with you about your diet. I'm not here to give you any medication." Thus presenting himself as a new stimulus, the patient's established fear responses are less likely to be elicited.

A second type of learning, operant conditioning, has been widely used in current behavior modification experiments. Operant learning is different from

classical in that the organism must first respond before he can be conditioned. Specifically, a behavior is shaped through the use of reinforcement. In B.F. Skinner's (1954) work with various animals, he reinforced or rewarded with food successive approximations of the desired behavior, e.g., if the desired behavior for the rat was to press a bar in his box, he would be rewarded with a food pellet for his first moving toward the bar, and then when he touched it with his paw, and finally again when he pressed it. According to operant conditioning theory, a reinforcer is anything that increases the probability of the response that systematically precedes it. Therefore, a reinforcer could be a smile, a word of praise, a desired food, or even money.

The dietitian may make use of operant conditioning in rewarding patients and staff for appropriate behavior. When the learner emits the desired response, the dietitian can immediately reinforce the behavior, if only with words. Furthermore, the dietitian can instruct patients in devising behavior modification programs of their own, encouraging them to reward themselves for adhering to their prescribed diets.

A specific example of behavior modification might be to teach the client to give himself rewards for staying on his diet for one day. Promising himself a trip to see a movie, for instance, could be the reinforcer for sticking to a diet. The old long-term reinforcer of buying clothing a size too small can be effective for some obese patients; however, an immediate reinforcer is more effective in shaping behavior than the promise of gratification in the future.

Both classical and operant conditioning theories make the assumptions that man can be controlled, that man operates in predictable ways, and that basic needs and emotions tend to serve as motivators. For these reasons both theories are labelled as "Behavioristic." A third group of theories, the cognitive

field or humanistic theories, would disagree.

The cognitive field learning theories, frequently known as "self" or "humanist" views of learning, assert that learning is purposeful, personal, and mentalistic. Rather than depending upon conditioning as an explanation for learning, the cognitive field theorists rely upon the learner's perception of the task, not on manipulation of stimuli or reinforcers.

Kurt Lewin (1936) nearly forty years ago first explained his notion of "life space." He espoused a phenomenological viewpoint that perceptions actually form a man's personal environment or life space. Furthermore, a person is motivated to learn what is perceived as important in his life space. People move toward goals that are important to them - relevant to where they see themselves. Coombs and Snygg (1959) and later Carl Rogers (1970) asserted that learning is a humanistic endeavor. If a teacher wants to teach a particular body of information, he must first meet the learner in his life space, i.e., he must make the information sufficiently significant to the learner that he actually wants to learn. Such cognitive field theorists encourage professional educators to spend instructional time in identifying why subject matter is important to the learner. Then the material is much more likely to be learned and retained.

The dietitian can use cognitive field learning theory when approaching a patient. Precious time could be spent in exploring why the patient's prescribed diet is important for his life space, for if the patient sees its relevance, he is, therefore, more likely to follow it. Similarly, if the patient's life space is different from the majority culture, if he is used to ethnic foods, the dietitian could be sensitive to that difference and translate the recommended foods into dishes that are relevant to the actual eating and cooking culture of the patient. Then the diet would have meaning for him.

Instructional Objectives

Regardless of whether the dietitian approaches his role as an educator from the behaviorist or humanist point of view, he can make use of another concept in educational psychology: the hierarchy of instructional objectives. In every teaching situation, there is a goal or specific objective to be attained, something for the learner to do. Often the objective is stated, e.g., "You are going to be able to choose foods from this list which are appropriate for your diet." If the objective is stated, there are distinct advantages in the learning situation: First, it helps the professional in planning instruction, and second, it helps the learner to know what is expected of him.

Benjamin Bloom (1956) in his Taxonomy of Educational Objectives identified objectives in a hierarchy of six levels. He stated that the primary level was Knowledge, followed by Comprehension, Application, Analysis, Synthesis, and Evaluation.

Knowledge, as the first level, involves the act of recalling specific factual information, and therefore, is crucial to functioning on higher levels. An appropriate objective for the client of the dietitian is, "The learner recalls or names five foods on his prescribed diet."

The second level of educational objectives, according to Bloom, is Comprehension, where the learner defines the meaning of the factual information of Knowledge level. An example might be, "The learner states in his own words the rules of his diet."

On the Application level, the learner uses information from the two previous levels in new situation: e.g., given a list of new foods, the learner uses previously learned information in selecting those that fit his diet.

The fourth level, Analysis, requires the learner to compare and deduce elements or relationships. To compare and contrast two menus in terms of his diet would be an appropriate task.

Synthesis implies that the learner is producing something of his own--a new solution to a problem. One objective at this level might be, "The learner produces a diet of his own making."

Finally, on the level of Evaluation, the learner is required to make a judgment of worth, not on emotional grounds, but on logical reasons. A suitable objective is, "The learner evaluates two diets and chooses the one more appropriate for his needs."

Application of Theory

The purpose of this section of the paper is to describe more closely the applications of learning theory to the practice of dietetics so that professional dietitians can make some choices about interaction with clients, co-workers, one-to-one or in groups.

The sentence above indicated not only the purpose of the authors, but also stated outcomes for the reader. Education has taken a big shift today, away from a teacher-centered approach to a learner-focused approach, away from thinking only about what the dietitian will do in the instructional situation, to first looking at what it is that the learner will be able to do. The "learner" refers to the client, the patient, or the person to be affected.

The assumption has been made that dietitians view themselves as educators. Education is a process designed to produce changes in behavior. As dietitian-educators, we want to produce behavioral changes associated with other people's food choices. A change in behavior about foods is critical to dietetics; a client's survival may be dependent on food behaviors. Dietitians are involved

with teaching survival kinds of behaviors related to helping a client correct a health problem or to maintain a desirable level of health.

Successful client education is more than just giving information, for telling someone to avoid all salty foods will not necessarily result in that behavior. Success depends on two things: 1) the content or subject matter (which is nutritional science) and 2) the knowledge about how to affect the probability of human learning. The knowledge of nutritional science is a subject in which all professional dietitians have been well trained. They are just beginning to become experts in the science of education. Very simply stated, the educator role involves learning to communicate with the client rather than talking at him.

Dietitians have a unique set of problems when working with clients, primarily the transmission of technical information to unskilled consumers who are seeking help while in emotionally distressing circumstances. Oftentimes, clients do not comprehend or even remember the content of their interactions with dietitians. There is also the serious problem of non-compliance to nutritional advice. This may be partly a lack of understanding by clients of what is expected of them and the purpose of the therapeutic regime. The opposite of this is that dietitians sometimes fail to provide the needed information or overestimate or assume dietary compliance.

In the previous two years, one of the authors has had the opportunity to work with approximately 100 dietitians who were interested in improving their instructional capabilities. These dietitians described feelings of ineffectiveness and uncertainty about having met a client's real needs. As a part of interaction with these dietitians, she listened to tape recordings of their counseling sessions with clients and analyzed them for application of the educational principles.

As a dietitian-educator, one can now start to focus on the power of education to affect learning in a desirable way. You can use the power of teaching with integrity to affect learning -- to set up a client with the ability to act - to make choices - to learn what is essential in a favorable environment to guarantee his success later in his own environment.

Clients come to instructional sessions with varying degrees of willingness and ability to act on their behalf. Willingness may come from beliefs they hold about the possible effects of certain actions on their health, about the likelihood of these effects occurring again, the value of necessary action to ward off reoccurrence, and the costs involved in acting. Much of this may be conditioned response. They will determine the client's willingness or motivation to behave differently. If the client decides that the nutritional regime is unimportant or uncontrollable or too difficult, he probably won't increase his motivation to change. But if he has the motivation, he likewise will not be able to act until he has the basic abilities required to perform the behavior. It is these basic abilities that we can provide as a result of the instructional session.

Using behavioristic and humanistic theory, the dietitian can approach the client learning situation. Each theory is appropriate and useful in client counseling. What is more humanistic than helping the client develop skills he needs to actually make decisions about his food when he is at home and on his own? The outcome of that is humanistic. It is not humanistic, on the other hand, to expect or assume that a client will make the perfect and proper food choices at home if he hasn't been taught the decision-making capability. Perhaps all that he knows is what is acceptable and what is not acceptable. He may not know how to use that information to decide what to eat. A most obvious

example is expecting that a newly diagnosed diabetic would be able to go home with the exchange system and use it flawlessly after a 20-minute discharge diet.

Since dietitians customarily do not work with clients in their homes, it is important to focus on the instructional situation which will help to insure that client's success later. If it is appropriate, recall a previous encounter with a client.

One of the first ways to apply educational theory is to develop and implement a systematic approach to the instructional session, using the hierarchy of instructional objectives previously presented. Robert Gagné, in his book Principles of Instructional Design (1974) states, "Learning must be planned rather than haphazard. Planned instruction has the purpose of helping each person to develop as fully as possible, in his own individual direction."

How does one begin this planning process? First, determine the capabilities the client needs to possess to be successful with a particular dietary plan. Sequence each session or each part of the session so that he moves toward the achievement of that goal. Planning instructions can be likened to the process of baking a cake. If one wants to be more sure of the results, one takes preliminary steps such as measure ingredients, preheat the oven, prepare the pans. Then comes the mixing in a sequential order, and finally the actual baking of the cake. The instructional process can be thought through in the same sequential manner. First determine where you are going or what the result will be. Most dietitians agree that the goal for their clients is that they be able to choose the foods appropriate for dietary modification, i.e., low sodium, diabetic, restricted calories, etc. Analyze the process before ever seeing the client to determine what it takes to acquire that skill. Then begin with the simplest skill, such as identifying acceptable foods and move to the more

complex skills which may be actually planning a day's selection of foods. For example, the process of learning how to choose foods using the diabetic exchanges might include these steps:

Identify the exchanges.

Classify foods into each exchange.

Match the correct portion sizes to foods in each exchange.

Determine the meal pattern for one day.

Plan meals for each pattern.

Plan meals for the total day.

Once one is clear on the process, one may change it to begin the actual instruction with what the client is already doing and modify that to what he can do to make it better. His dignity is preserved and he is set up to make his own choices. By starting with what the client is already doing, it automatically individualizes the session for that person. Generally this results in each meeting being a new and challenging experience for the dietitian. As with most plans, one checks to be sure that he has planned something that the client is willing to do. If not, it may be necessary to make some immediate modifications. An example of a time when a modification in the goal may be appropriate is a client who has never eaten breakfast and now is told that he is allowed a meat, milk, fruit, and bread everyday. It would be important to check on his willingness. Maybe he will only want to have one or two of those items to start. When the dietitian checks back on the information with the client or asks about his willingness, the dietitian is getting into his "life space." The results of such questioning will help to adjust the instruction to be more meaningful and therefore result in increased learning by the client. Ignoring that may produce a client that "tunes out." This process is also referred to as client

assessment. It encompasses finding out what the client already knows as well as what he may be willing to do in the future.

A second principle that can be adapted to client education is planning opportunities for the client to respond to the information. These responses will allow the dietitian to evaluate what has been learned. The client needs to demonstrate the learning by saying or doing something. The dietitian must not accept that nod of the head as indicative of complete understanding. Pose a question in place of that and allow the client time to respond. A simple example of this frequently occurs when the client is asked if he understands the reason for the diet modification. Usually he will nod his head and the dietitian goes on to the next piece of information. When the dietitian hears himself asking these kinds of questions, he can stop to check. He might say, "O.K., would you describe for me in your own words why you think it is important." There may be a slight pause and it will take a little longer, but it may make the difference in the client ever attempting to follow the modification.

Examples of the kinds of activities that have been successfully given for practice are these:

1. Once the dietitian and the client have agreed on a meal pattern, such as a low sodium, the client is asked to describe the kinds of foods he would buy. He is asked to describe how he would prepare those foods.
2. Ask the client to name five foods acceptable for a low sodium diet that he might choose for snacks.
3. If purchasing certain kinds of foods is important, offer choices and allow the client to tell which would be the better choice.
4. Use flash cards, models, pictures, etc. to give ample practice for making choices, determining portions, putting together a meal.

5. Have the client describe what he would eat tomorrow, pack in his lunch, choose in a restaurant, etc.

What the dietitian decides is open to imagination and the facilities where one is delivering the instruction. As was described, look for the application of information rather than memorization and repetition. A memorization kind of practice would be to recall the names of the exchanges; an application would be to plan a meal using each exchange.

If one is not in the habit of allowing time for client responses, it may be slightly awkward at first and one may find himself wanting to supply all the answers. The dietitian is encouraged to hold off and give the client some time. The author has personally been amazed at the level of understanding in clients when they have had the opportunity to be involved.

Another way to check on the level of learning is to ask questions at the end of the sessions such as, "What do you think you will be able to do at home? What problems do you see now that you might have? How can I be of further assistance?" When possible, keep the relationship on-going with follow-up visits, phone calls, or mailed correspondence.

A final and equally important aspect of education is the use of positive reinforcement. It's quite simple to begin a session by reinforcing what the client is presently doing well, even if it's eating-period. Unfortunately we are conditioned to look for the negative. A dietitian gave a patient a practice activity which involved selecting foods from a list. The patient got 9 of 10 choices correct; the dietitian called attention to the incorrect response. She said nothing about the 9 correct ones. The responses which the dietitian gives act as reinforcement to the client to repeat those behaviors. Reinforcement is as simple as replying, "Right, that's good, excellent, great, sounds

perfect, that's correct," or whatever is sincere for that individual dietitian.

In summary then, the dietitian in the professional role as an educator uses learning theory to 1) understand previously conditioned responses of clients; 2) meet and approach the client in terms of that person's life space; 3) decide goals and provide opportunities for maximum learning; and 4) reinforce the appropriate behaviors.

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